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EXAMINER

BARNIE, REXFORD N

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PR4

Office Action Summary

Application No.
09/726,637

Applicant(s)
BEAMON ET AL.

Examiner
Rexford Barnie

Art Unit
2643



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 5, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

REXFORD N. BARNIE
PATENT EXAMINER

R. Barnie
09/16/02

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

Art Unit: 2643

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-9, 11-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kinser, jr. Et al. (US Pat# 5,790,633, cited by applicant).

Regarding claims 1 and 18, Kinser teaches a method for proactively maintaining a telephone system local loop comprising communicating with a communication network and acquiring status information associated with a digital loop carrier and predicting proactive maintenance based upon the status information(see column 24 line 29-column 25 lines 15-22, column 27, column 30 line 46-column 31 line 5, column 36 lines 4-12). Note that the amended limitation "automatically" stills reads on the functionalities of the predictor without taking into account the previous process which can be a manual process. Furthermore, according to Kinser, the intent of his invention is to reduce manual intervention and also, the sources which the predictor can analyze could be an automatic process including an automated line insulation test, messages from switching systems and alarms from pressure cables (see column 25 lines 11-22)..

Regarding claim 2, see the explanation as set forth above.

Regarding claim 3, Kinser teaches using a weighting factor (see column 44 lines 36-44).

Art Unit: 2643

Regarding claim 5, Kinser teaches the claimed subject matter comprising of loop facilities and control system (see column 7 line 40-column 8).

Regarding claims 6-8, Kinser et al. teaches using a predictor and also, being able to dispatch a workforce to handles faults in a geographical area (see column 36, column 46 lines 38-58, column 29 lines 54-column 30 line 17, column 54 lines 34-67).

Regarding claim 9, Kinser teaches updating the digital loop carrier with completed service order or completed fault repairs, see for instance (see column 47 lines 25-32)

Regarding claims 11-12, Kinser teaches a loop maintenance operating system which teaches the claimed subject matter in (see column 40 lines 23-66, column 24 lines 49-64).

Regarding claim 13, Kinser teaches communicating with a communicating network and acquiring at least one of customer information associated with copper line pairs, service information associated with copper line pairs and status information associated with a digital loop carrier; storing the acquired information, combining the stored information and predicting proactive maintenance based upon the combined information (see column 24 line 29-column 25 lines 15-22, column 27, column 30 line 46-column 31 line 5, column 36 lines 4-12, column 44 lines 36-44)). Note that the amended limitation “automatically” stills reads on the functionalities of the predictor without taking into account the previous process which can be a manual process. Furthermore, according to Kinser, the intent of his invention is to reduce manual intervention and also, the sources which the predictor can analyze could be an automatic process including an

Art Unit: 2643

automated line insulation test, messages from switching systems and alarms from pressure cables (see column 25 lines 11-22)..

Regarding claim 14, see the explanation as set forth in the rejection of claim 13.

Regarding claim 15-16, Kinser teaches dispatching work order information describing the predicted proactive maintenance (see column 36, column 46 lines 38-58, column 29 lines 54-column 30 line 17, column 54 lines 34-67).

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2643

4. Claims 4, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser et al. (US Pat# 5,790,633, cited by applicant) in view of Kulatunge et al. (US Pat# 6,353,902).

Regarding claim 17, Kinser teaches a system for proactively maintaining telephone network facilities in a PSTN (see figs. 21-26 and disclosure) comprising a loop facilities and control system (112, 136), digital loop carrier module communicating with a communication network and acquiring digital loop carrier information, a database stored in memory and a processor capable of processing information stored in the database and of generating proactive maintenance

Kinser fails to teach being able to dynamically predict or attend to problems or faults associating with a network.

Kulatunge et al. teaches a network fault prediction and proactive maintenance system wherein future occurrence of a fault is predicted based on an analysis of the valid log and the characteristics found in a database. Corrective measures are taken to prevent the fault from occurring (see column 3 lines 20-32, column 1 lines 10-12 and 207 of fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kulatunge into that of Kinser thus making it possible to predict future possible errors and taken corrective measures.

Regarding claims 4 and 19-20, see the explanation as set forth in the rejection of claim 18.

Art Unit: 2643

5. Claims 1, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulatunge et al. (US Pat# 6,353,902).

Regarding claims 1, 13 and 18, Kulatunge teaches a network fault prediction and proactive maintenance system wherein status information associated with a network can be gathered and then automatically predicting proactive maintenance upon acquiring the status information but fails to teach a digital loop carrier. Note that the amended limitation “automatically” stills reads on the functionalities of the dynamic analyzer/predictor without taking into account the previous process which can be a manual process.

Digital loop carriers are notoriously well known in the art and given the fact that Kulatunge fails to put a restriction on the network type, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kulatunge into any network type thus making it possible to foresee future faults/error and to take precautions accordingly.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser.

Regarding claim 10, it would have been obvious to use any well known tech access dispatch system including that of telecordia to dispatch work order information thus making it possible to take corrective measures for detected faults or errors within a network.

Response to Arguments

7. Applicant's arguments filed on have been fully considered but they are not persuasive.

Art Unit: 2643

The applicant argued that the prior art of record (Kinser) fails to teach the amended limitation comprising of “automatically predicting proactive maintenance based upon status information”.

The examiner disagrees because eventhough, Kinser teaches the possibility of relying on customer information, the reference also teaches being able to use automated information concerning a network via an automated line test, monitoring signaling information from a switch and alarms from cable pressure for further analysis by a computer predictor, a computer used to reduce the amount of manual activity required to analyze many sources of data and to provide pro-active maintenance by providing early warnings to avoid loss of revenue, grouping together work assignments and so forth (see column 25).

The applicant argued that neither Kinser nor Kulatunge et al. fails to teach the claimed limitations.

The examiner disagrees because the combination including Kinser teaches in (see figs.) a LFCS, loop facility, databases, a predictor and so forth. The examiner supplemented the teaching of Kinser with that of Kulatunge to teach the dynamic analyzer eventhough it could be said that the predictor of Kinser possesses similar abilities. Kulatunge teaches “automatically predicting pro-active maintenance based upon status information” by using an automated dynamic predictor for information gathered automatically and associated with a network including alarms wherein the gathered data can be filtered manual by an administrator. Note that the amended limitation “automatically” stills reads on the functionalities of the predictor without taking into account the

Art Unit: 2643

previous process which can be a manual process. In the case of Kulatunge, the previous process is a semi-automated process.

In summary, the explanation as set forth in the rejection of the claimed subject matter is believed proper and permissible.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to REXFORD BARNIE whose telephone number is (703) 306-2744. The examiner can normally be reached on Monday through Friday from 8:30 to 6:00p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks

Art Unit: 2643

Washington, D.C. 20231

or faxed to (703) 872-9314 and labeled accordingly (Please label
"PROPOSED/INFORMAL" or "FORMAL").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington,
VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should
be directed to the group receptionist whose telephone number is (703) 306-0377.

RJ Barnie
REXFORD N. BARNIE
PATENT EXAMINER

Rexford Barnie
Patent Examiner
RB 09/16/02